

# **JEITA EDA -WG Activity and Study of Interconnect Model**

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**Asian IBIS SUMMIT in Shenzhen, China**

**JEITA EDA-WG**

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*JEITA ; Japan Electronics and Information Technology Industries Association*

# **Outlines**

- 1. JEITA EDA-WG Activities**
- 2. Short Term Direction of JEITA EDA WG**
- 3. Study of Interconnect Model**
- 4. JEITA IBIS Model Portal site**

# 1. JEITA EDA-WG Activities

## Objectives of JEITA EDA

### EDA Model for

#### Digital Consumer Electronics

Cellular Phone, LCD /PDP TV,  
Digital Camera/Video, DVD Recorder

(Digital , RF, and Analog circuits)

#### Auto Mobile Electronics ?

(Motor Drive, EMC)

### < Applicability of IBIS V4.1 >

# **EMI, SI and PI for Digital Consumer Electronics**

## **<Background>**

**EMI      High-speed Clock Frequency**

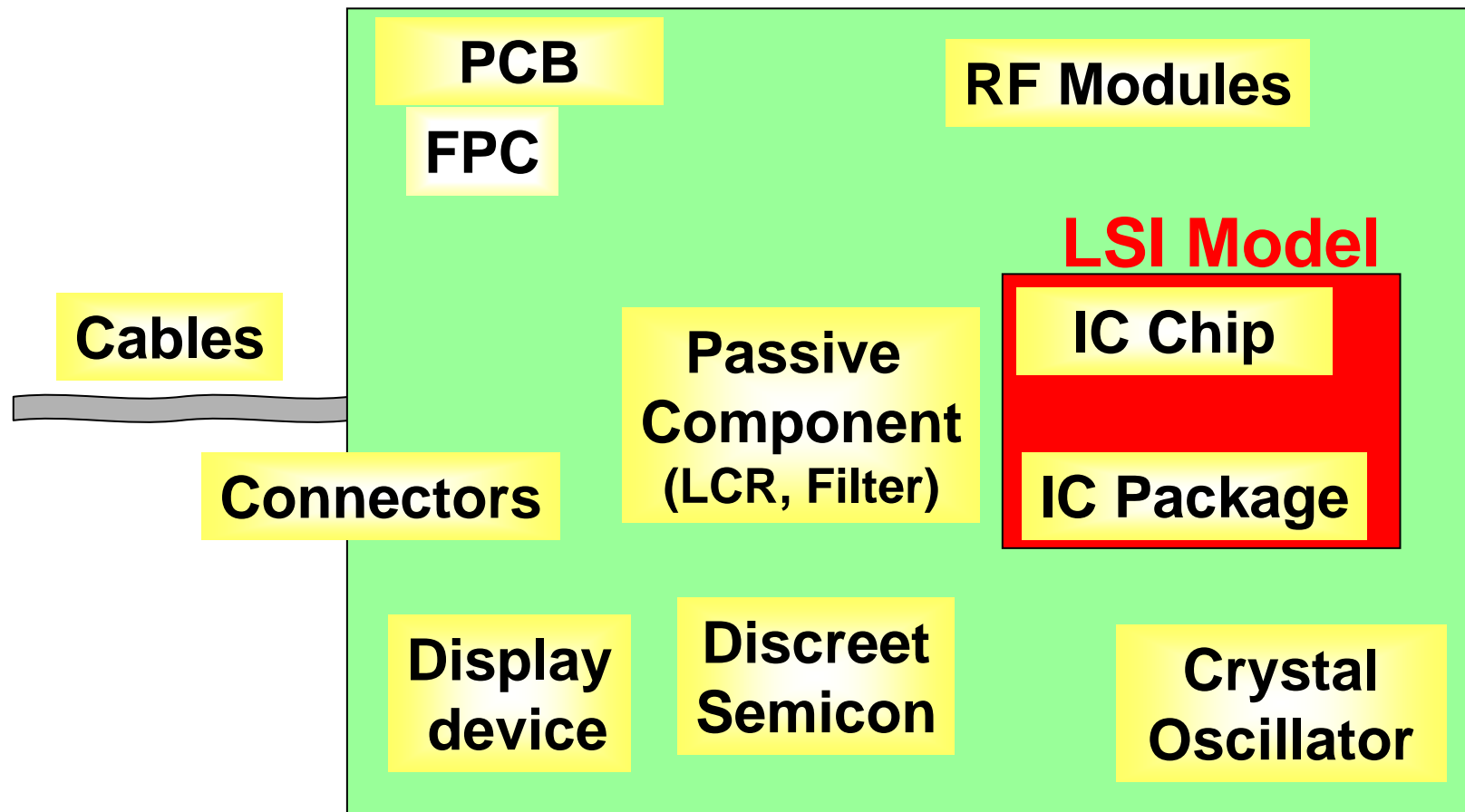
**SI        DDR, PCI, PCI-Express**

**PI        High density and Large scale IC**

**SiP and Module, PCB level**

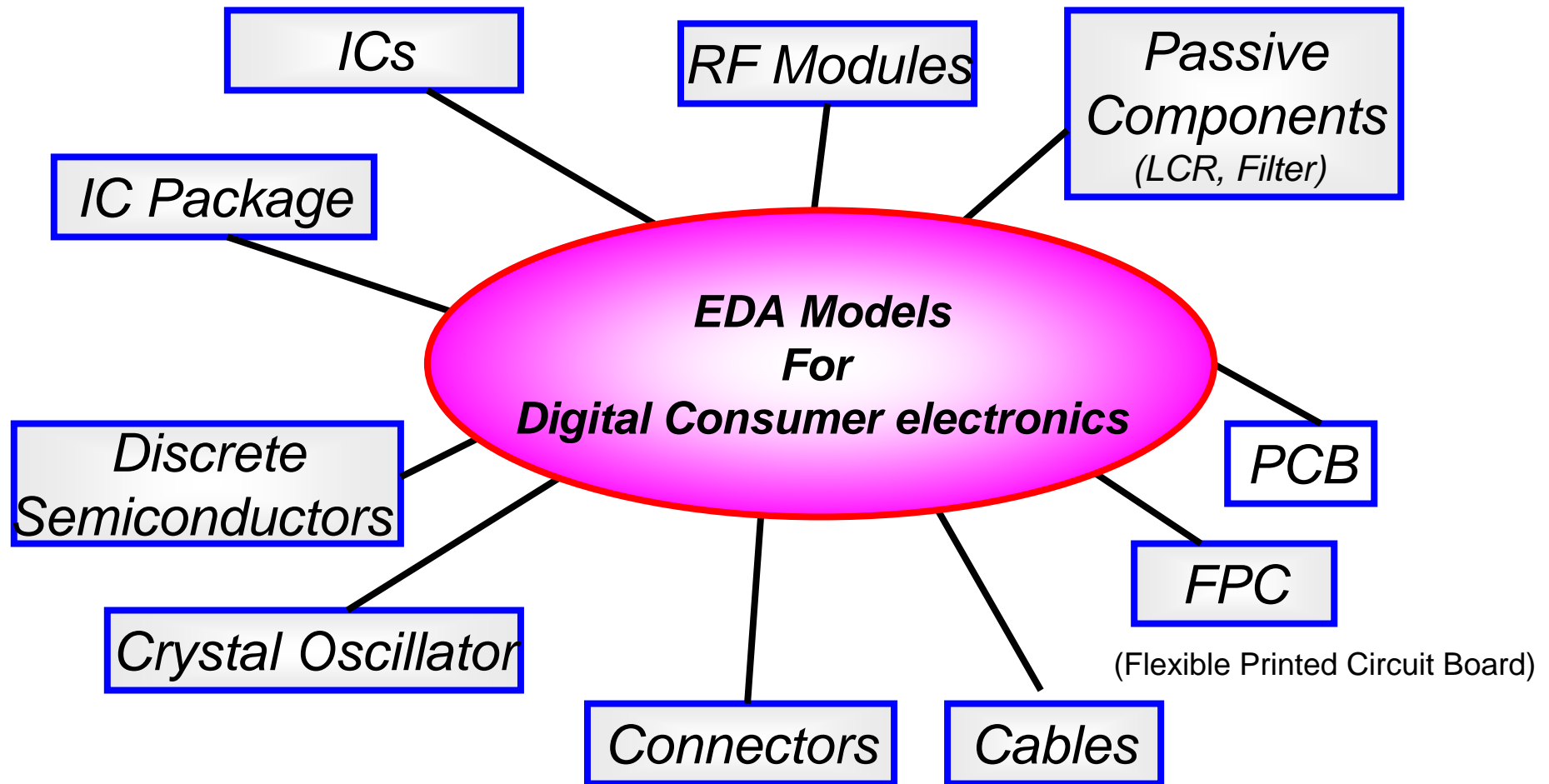
**EMI, SI and PI Simulation Technology**

# EDA Model for EMI, SI and PI Simulation



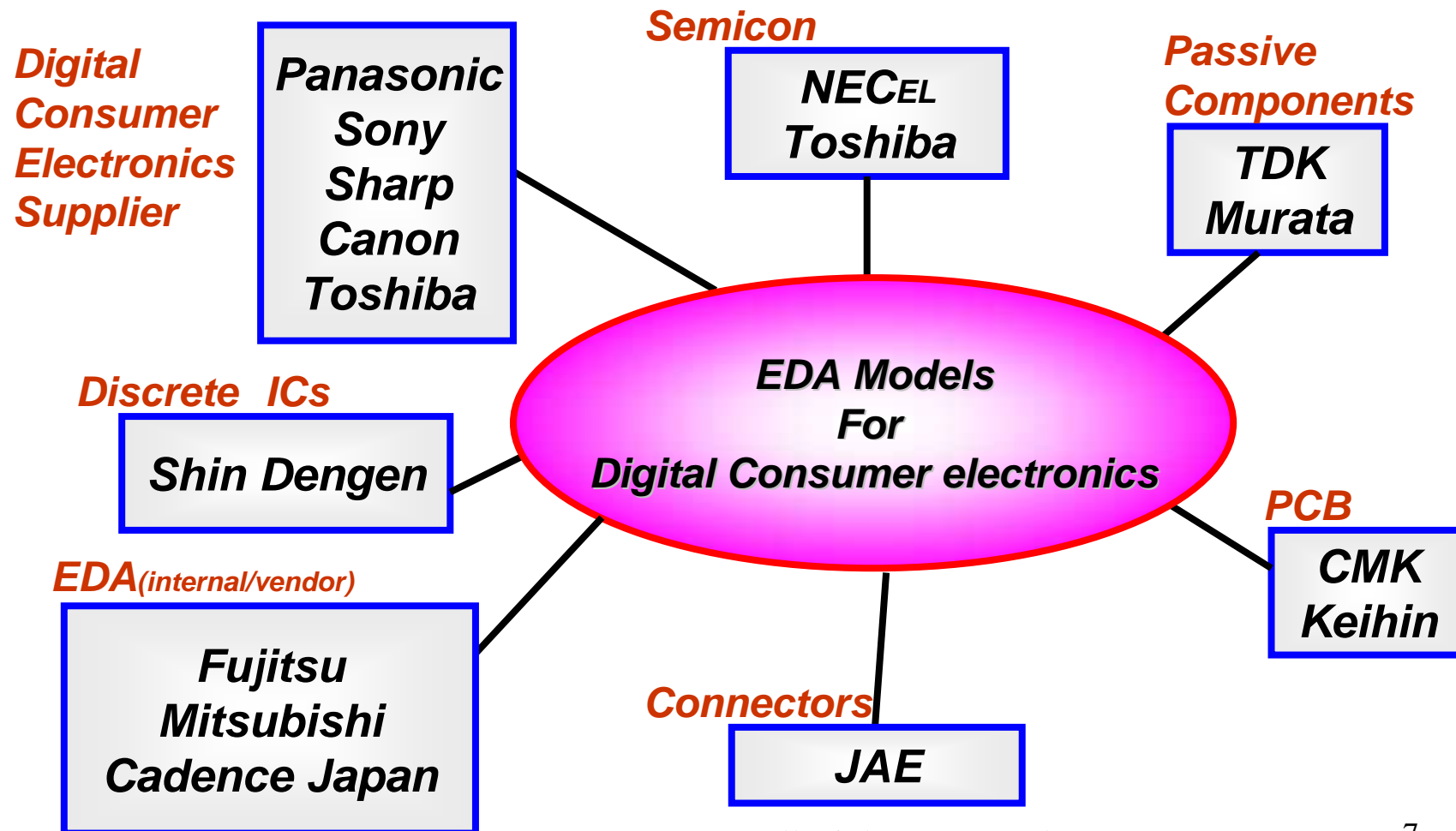
# Focus of EDA Model for Simulation

## 10 components



# JEITA EDA-WG Member

## 16 Major Companies



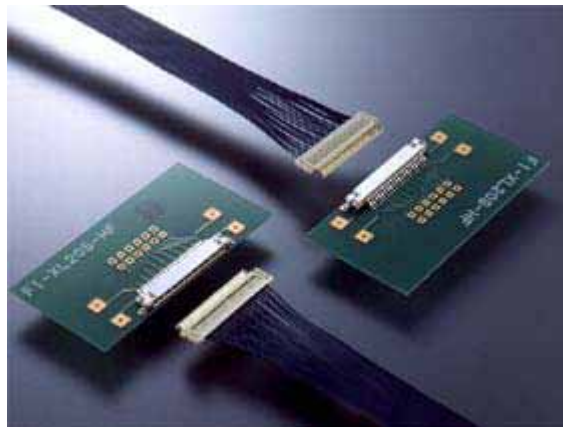
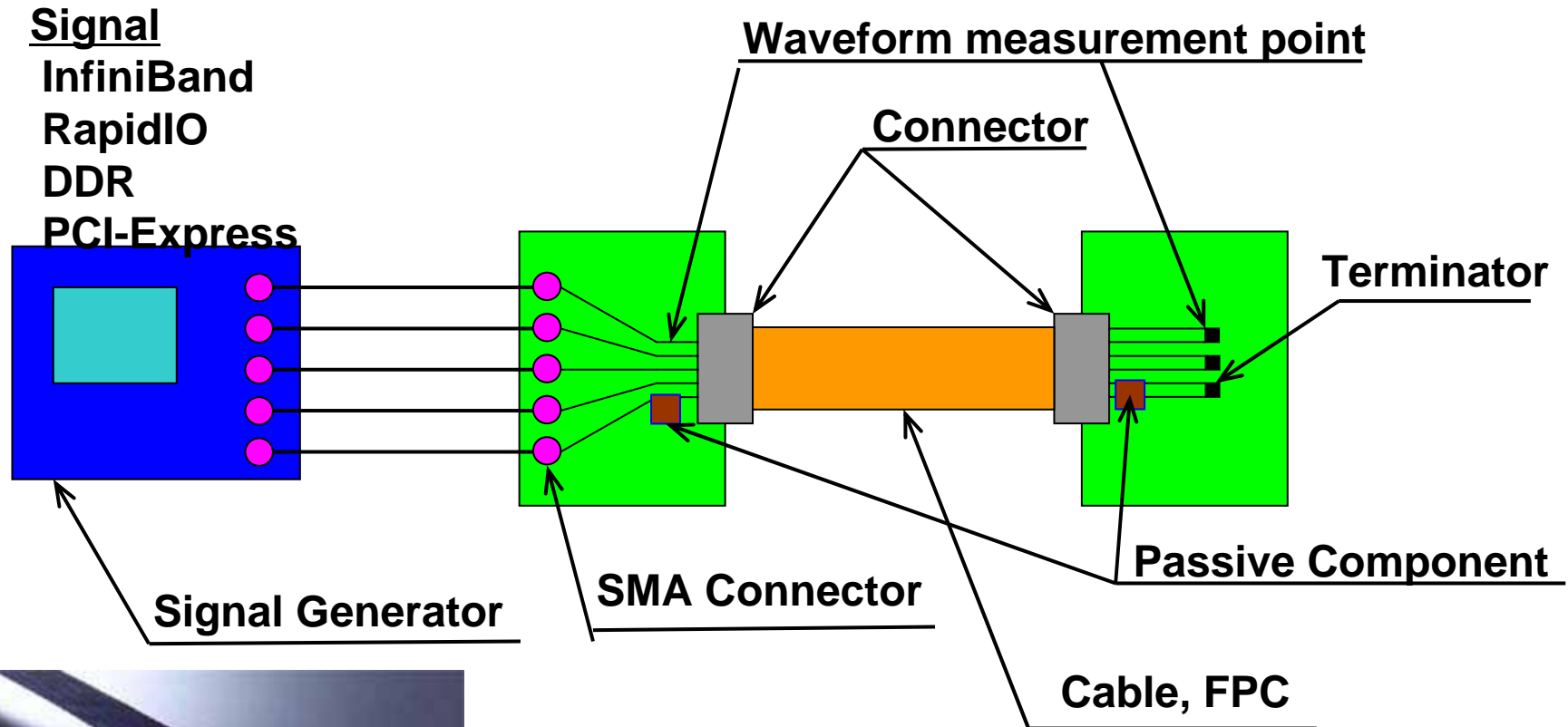
## **2. Short Term Direction of JEITA EDA WG**

- **Study of Interconnect Model**
- **IBIS Models of Passive Components and Connector and other Components**
- **JEITA IBIS Model HP**
- **Discussion about Case study of Simulation for Digital Consumer Electronics and JEITA-IBIS Joint meeting periodically**



# 3. Study of Interconnect Model

## SI Model (Connector, PCB, Cable)



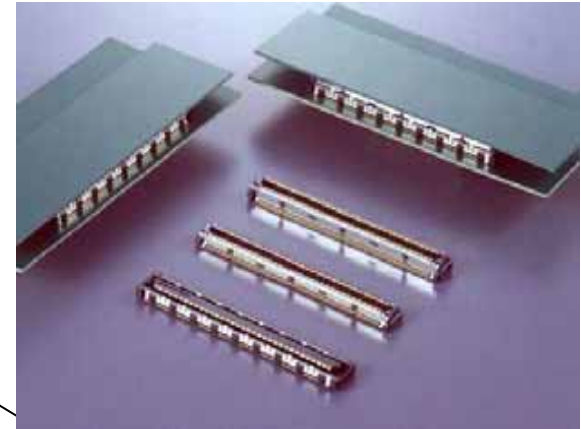
JAE (Japan Aviation Electronics Industry)  
FI-X Series

# **Study of Interconnect Model for Signal Integrity**

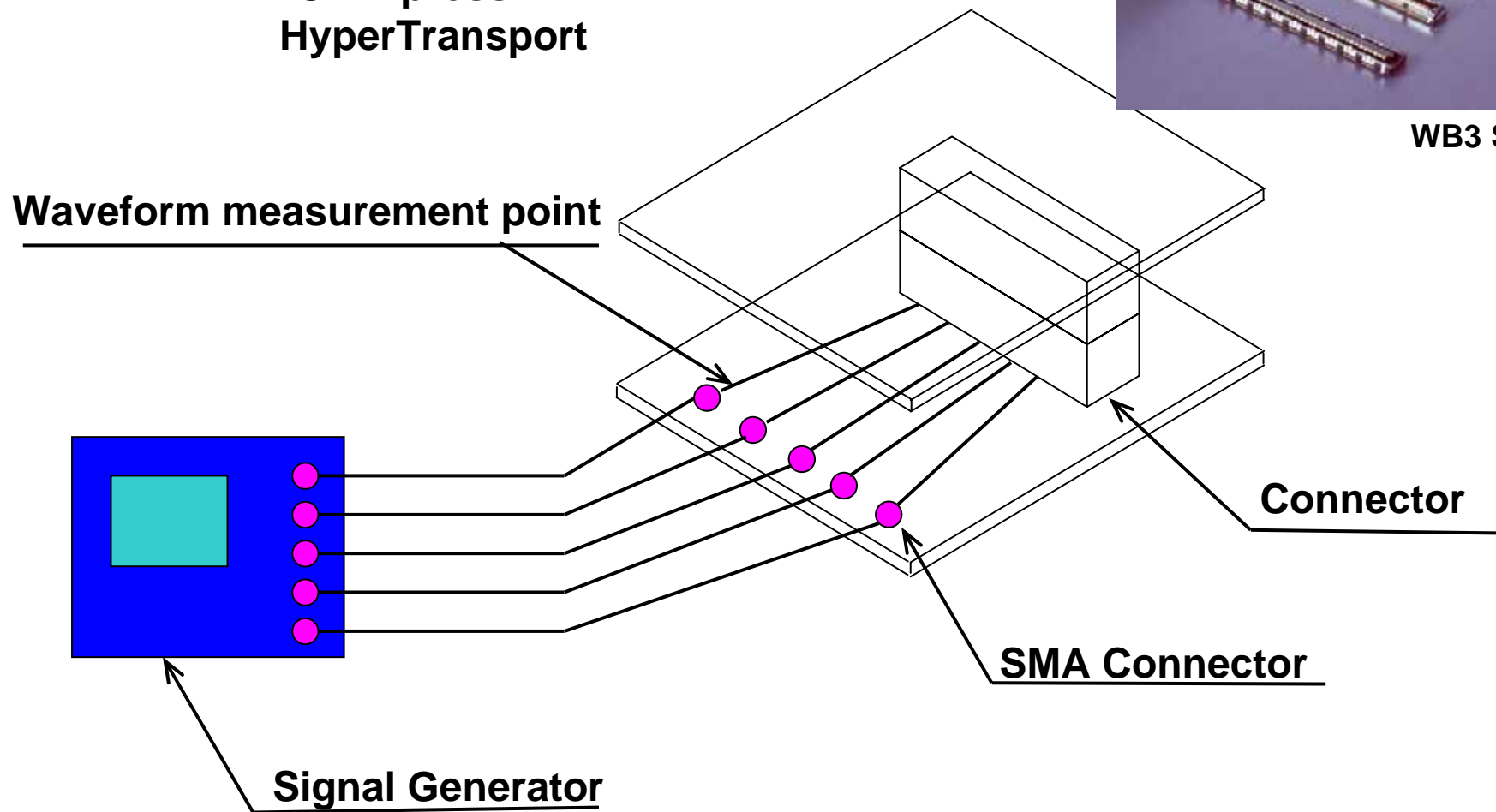
- ◆ **Target Application; DDR, PCI-Express etc.**
- ◆ **EDA Model; Connectors,  
Passive Components,  
PCB (Via, Pattern),  
(LSI)**
- ◆ **Simulation Tool; Cadence etc.**

# SI Model (Connector- Type B; stacked module, PCB, Cable)

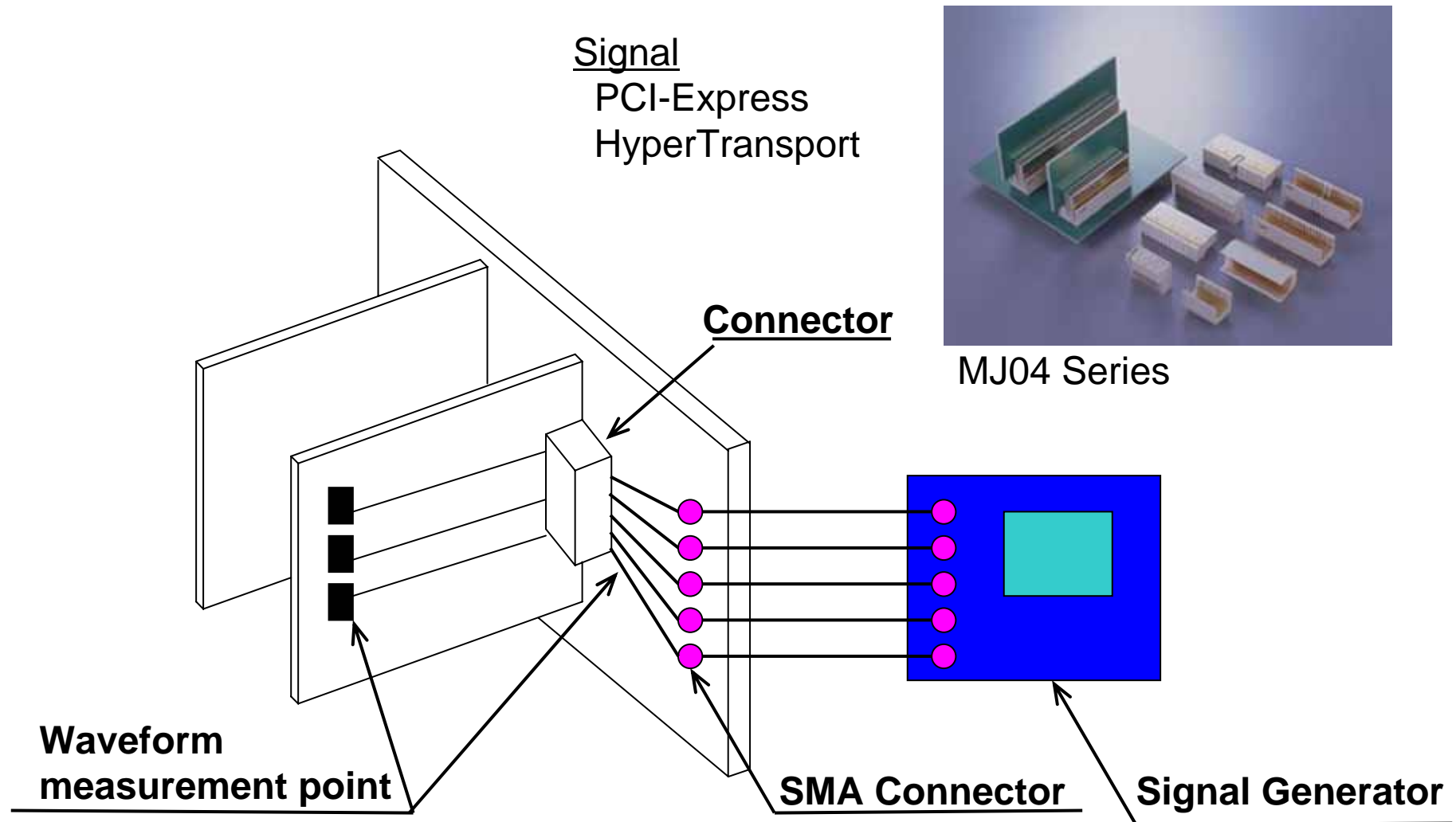
Signal  
PCI-Express  
HyperTransport



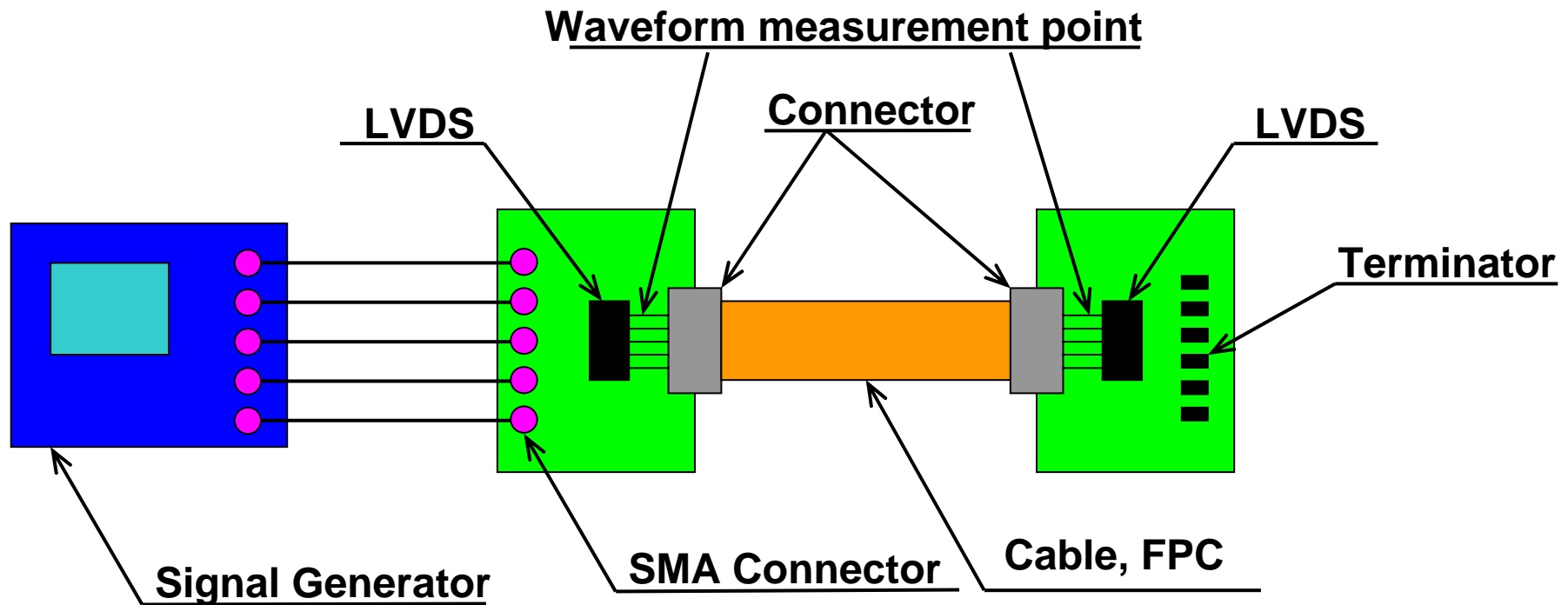
WB3 Series



## SI Model (Connector- Type C, PCB, Cable)

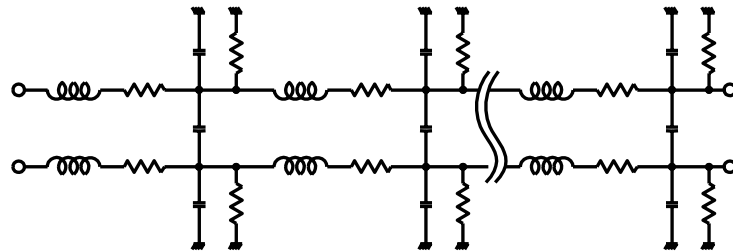


## SI Model (Connector, PCB, Cable, LVDS)

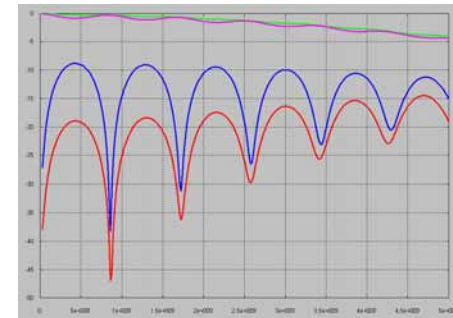


# Simulation Model

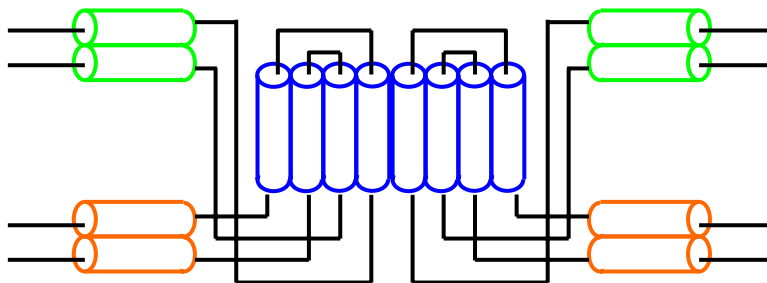
Equivalent circuit



Simulation



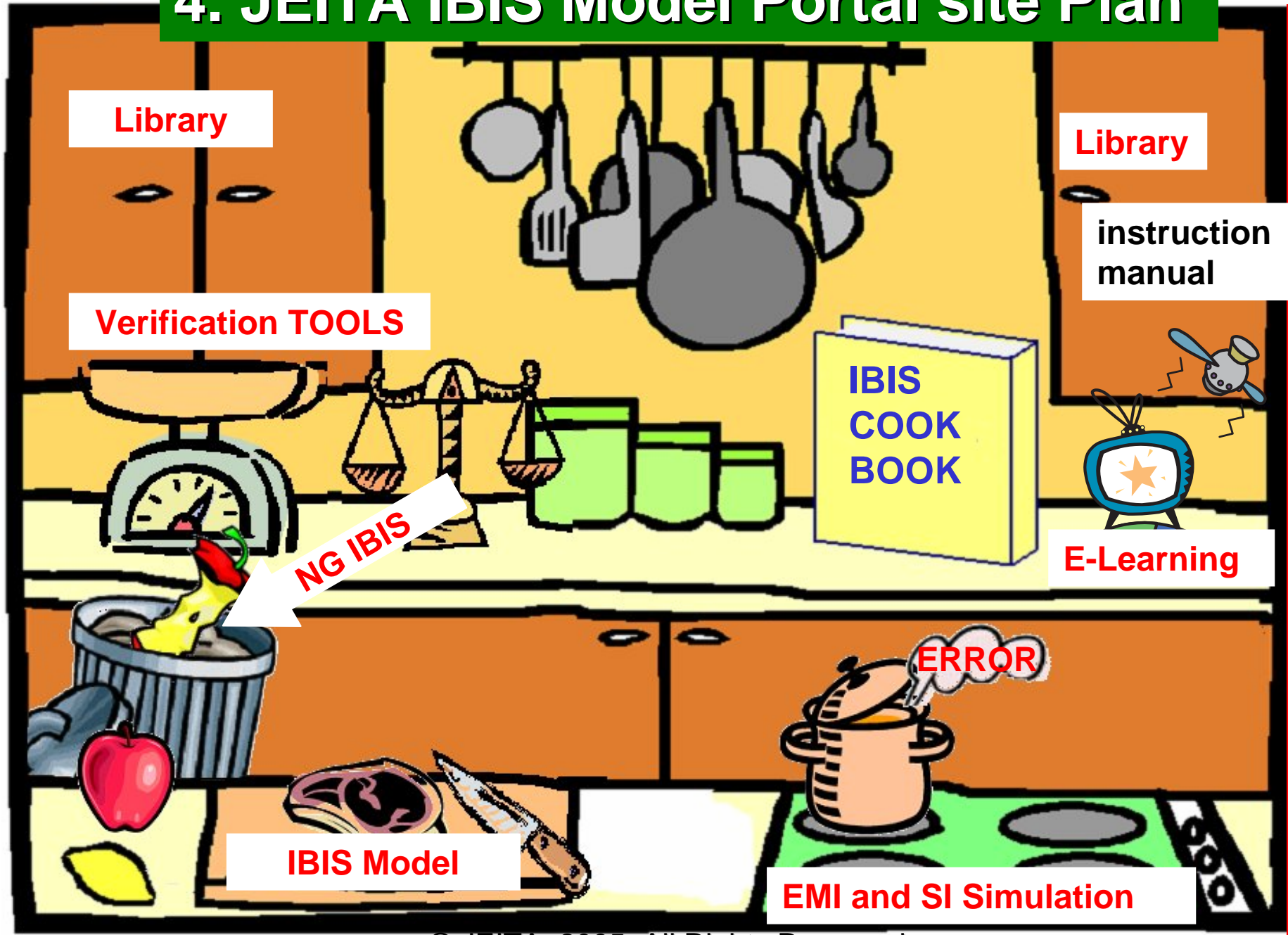
TML



Measurement



## 4. JEITA IBIS Model Portal site Plan

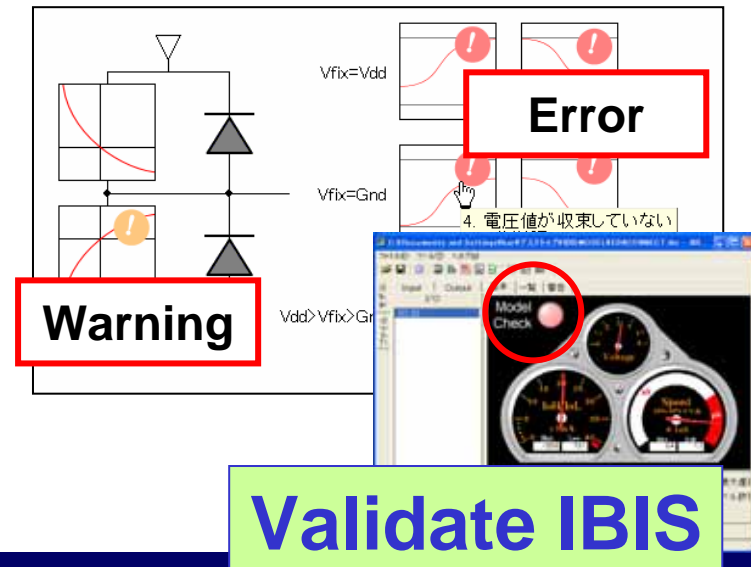
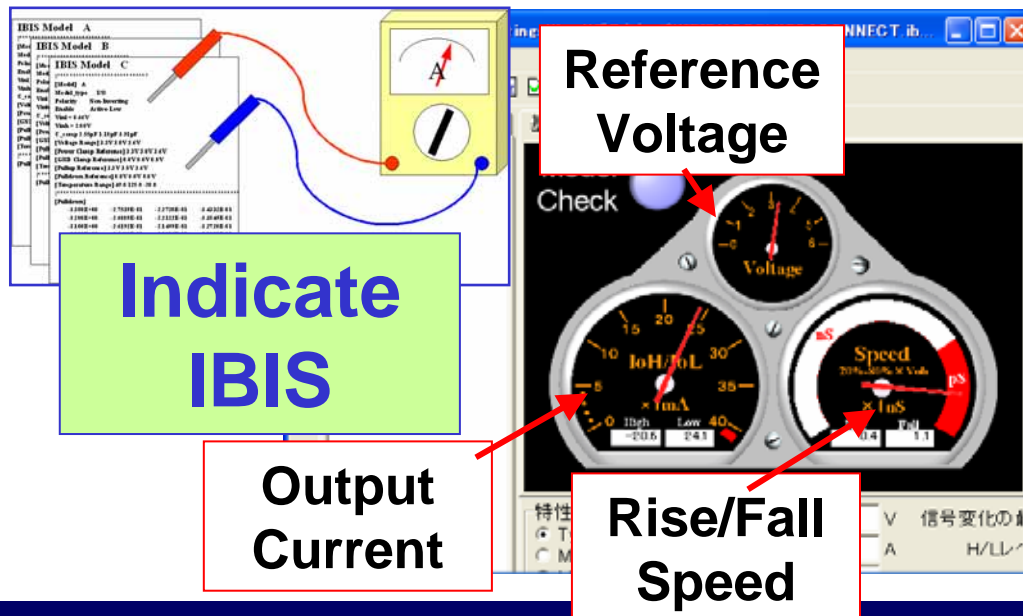


# **JEITA IBIS Model Portal Site Contents**

- **IBIS Documentations**  
**COOK BOOK**
- **IBIS Library**  
**Instruction manual**  
**IBIS Model Storage rack**
- **IBIS Training / IBIS E-Learning**
- **IBIS Free Tool**

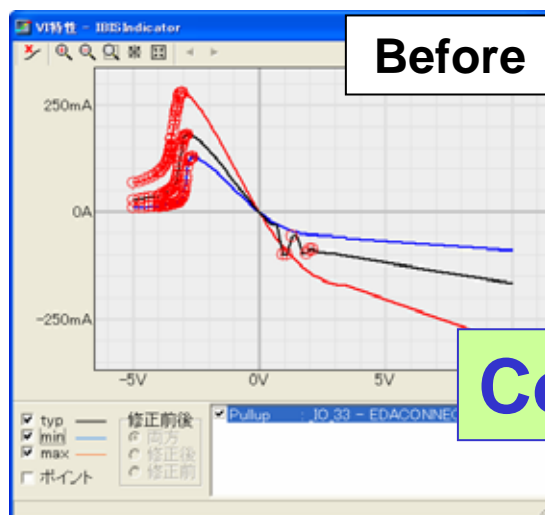
**Support for IBIS Users**



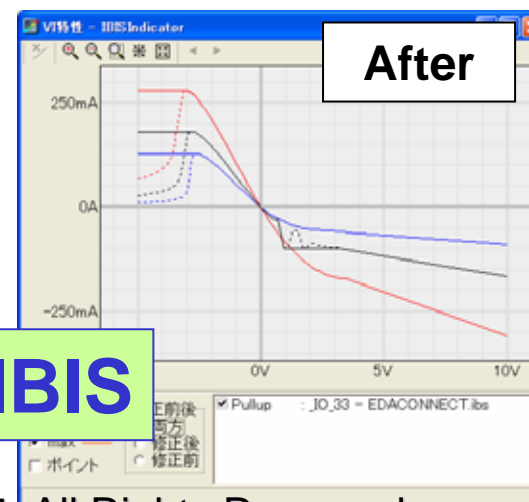


# IBISIndicator<sup>TM</sup> for IBIS Quality Control

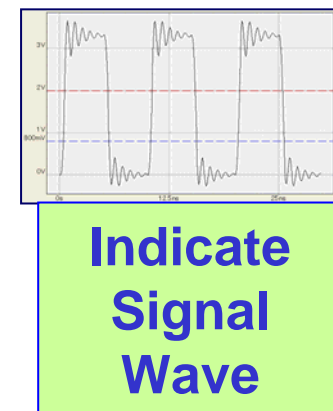
By KAW/JAPAN [www.kaw.co.jp](http://www.kaw.co.jp)



**Automatic Correction**



**Correction IBIS**



**Thank you for all the help**  
**EIA/IBIS Committee!**